

not only for the sake of medical education and of public health, but also for the State and Nation.

The task is more than enough for both institutions. Nor must it be overlooked that the position of our Pacific institutions is strategic and that the welfare of the entire country is best promoted by a general and equal development throughout its broad domain. Let us hope that philanthropic persons both within and without the State will gladly acknowledge that from the beginning Stanford has assisted very materially in carrying a large public burden, and that with the growth of population she must of necessity carry more. Such a role will not in the least restrict the activities of our State University. It is bound to promote rather than hinder its progress.

(Stanford University, January 26, 1923).

CONGENITAL ELEVATION OF THE SCAPULAE *

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Congenital elevation of the scapulae is a rare deformity, as evidenced by the fact that there are but five cases reported in all six numbers of the quarterly index of medical literature. There has been but one case in the last few years in the Stanford out-patient department. Both the Stanford case and the one here reported showed somewhat similar conditions.

There are two types of elevated scapulae—one in which the scapula is pulled up apparently by muscular action only, and a second type in which there is a definite bony deformity that apparently changes the leverage of the muscles in such a way that the scapula is pulled upward. It is of this latter type that I wish particularly to speak.

In this form there is a bony bar that runs from the upper portion of the scapula to the posterior portion of the lower cervical vertebrae. A definite joint is formed at either end of this bar. This was the condition present in both cases referred to above. In endeavoring to find why such a bar is present, most naturally one looks back into the phylogenetic ancestry of the race. The only thing that seems at all likely to be the phylogenetic ancestor of this accessory piece of bone is a cartilaginous bar, which occupies a somewhat similar position in a special group of fishes; namely, the dipnoi.

In May, 1921, a boy, E. R., age two years, was brought to see me with the complaint of deformity of the left shoulder. The child had been a full-term child; had three older brothers and sisters well developed; no abnormalities in family; birth was normal; no instruments used; had a perfectly normal babyhood up to one year. There is a history of a fall at the age of one year. About

three months ago—that is, when the child was one year and nine months old—the parents began to notice that there was inequality in the shoulders.

On examination, the left scapula was definitely higher than the right and somewhat smaller than the right. The neck muscles on the left side seemed to be bunched. Motion in the scapulo-humero joint was not quite so free on the left side as on the right side. X-ray examination showed congenital elevation of the left scapula. The upper end of the shaft of the left humerus was expanded and showed an area of decreased density. This was somewhat irregular about the margins. This suggested a bone cyst with fracture into it, with callus formation. Lying behind the lateral mass of the fifth cervical vertebra on the left side, there was a smoothly outlined bone suggesting a cervical rib.

A few days later operation was undertaken, the operation consisting of two parts—first, removal of the accessory bar of bone; and second, a plastic on the muscles of the back below the scapula in order to hold it down. An incision was made over the bar which could easily be felt running from the upper inner angle of the scapula to the upper thoracic vertebrae. This bar was divided and most of it excised; the stump at either end being left to avoid too much mutilation, was covered in with soft tissue so as to prevent the regeneration of the bar. This wound was closed. A second incision was then made vertically between the spinus processes and the posterior border of the scapula. A V-shaped piece was then taken out of the trapezius in such a way that the base was at the border of the trapezius and the apex at about the fifth or sixth thoracic spine. A suture was then taken from the inferior angle of the scapula, taking in as much tissue as possible about the angle of the scapula, and carried down through the muscles and brought out through the skin at the region of the eleventh or twelfth thoracic spine. The needle was then reinserted at this point, and brought out again through the muscles at the angle of the scapula. This was a heavy suture and capable of withstanding a great deal of tension. It was tightened and the scapula thus brought downward and fixed in place. The V-shaped rent in the trapezius was then sutured as an additional measure to hold the scapula down. The scapula came down so readily that it was not necessary to do anything to the elevators of the scapula. The wound was then closed and the child's arm and thorax encased in plaster, in order to hold him quiet. He made an uneventful recovery and went back to his home in Mendocino County after about three weeks.

I have not seen the child since, but have heard from the parents that they are well satisfied with the result, and that the two shoulders are now very nearly alike.

Both parts of this operation have been done before, but, as far as I know, this is the first time that a complete operation has been done on one of these cases.

* Read before the Fifty-first Meeting of the California State Medical Society.